WE CLAIM:

1. A method of tuning the output of a sensor array for a vehicle seat occupancy sensing system that is used with a neural net for occupancy classification, said method including the steps of:

pressing a series of seat cushion body pressure distribution forms in a series of predetermined seating positions into a particular vehicle seat to produce a series of representative sensor response patterns from the sensor array;

comparing each sensor response pattern through the neural net to determine if any of the sensor response patterns are indistinguishable from one another;

determining which sensors were deflected and the amount of deflection in those sensors for the indistinguishable sensor response patterns;

adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net; and

repeating the above steps until the senor response patterns are distinguishable from one another.

2. A method as set forth in claim 1 wherein the method step of pressing a series of seat cushion body pressure distribution forms into a particular vehicle seat to produce a series of representative sensor response patterns from the sensor array further includes the step of securing a predetermined variety of child seats and child booster into the vehicle seat to produce an additional series of representative sensor response patterns for these items.

3. A method as set forth in claim 1 wherein the method step of adjusting the biasing of

said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net further includes the step of changing the biasing members of said sensor to increase the biasing force opposing the weight placed in the vehicle seat.

4. A method as set forth in claim 1 wherein the method step of adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net further includes the step of changing the biasing members of said sensor to decrease the biasing force opposing the weight placed in the vehicle seat.

5. A method as set forth in claim 1 wherein the method step of adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net further includes the step of changing the biasing members of said sensor from a constant spring rate biasing member to a variable spring rate biasing member.

6. A method as set forth in claim 1 wherein the method step of adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net further includes the step of changing the biasing members of said sensor from a variable spring rate biasing member to a constant spring rate biasing member.

7. A method of tuning the alignment of a sensor array for a vehicle seat occupancy sensing system that is used with a neural net for occupancy classification, said method including the steps of:

locating a plurality of sensors in the form of an array so as to have a differing number of

sensors activated by each of a series of different predetermined seat cushion body pressure distribution forms when placed in the particular vehicle seat in a normal seating position;

pressing the series of different seat cushion body pressure distribution forms in a predetermined series of varied seating positions into the particular vehicle seat to produce a series of representative sensor response patterns from the sensor array;

comparing said sensor response patterns to determine if the output of any of the sensors can be categorized as one of a group that includes, never deflected regardless of occupant classification and seating position used, always at same deflection regardless of occupant classification and seating position used, and always at same deflection as an adjacent sensor;

modifying the location of a sensor in the array if the output of the sensor can be categorized as one in the above defined group so that its deflection varies for at least one seating position in at least one occupant classification; and

repeating the above steps until none of the sensors can be defined as belonging to one of the above categories.

8. A method as set forth in claim 7 wherein the method step of modifying the location of a sensor in the array if the output of the sensor can be categorized as one in the above defined group, further includes the step of removing a sensor from the array if it can be categorized as never deflected regardless of occupant classification and seating position used.

9. A method as set forth in claim 7 wherein the method step modifying the location of a sensor in the array if the output of the sensor can be categorized as one in the above defined group,

further includes the step of verifying that the sensor is operational if it can be categorized as always at same deflection regardless of occupant classification and seating position used.

10. A method of tuning the output of a sensor array for a vehicle seat occupancy sensing system that is used with a neural net for occupancy classification, said method including the steps of:

pressing a series of seat cushion body pressure distribution forms in a series of predetermined seating positions into a particular vehicle seat to produce a series of representative sensor response patterns from the sensor array;

securing a predetermined variety of child seats and child booster into the vehicle seat to produce an additional series of representative sensor response patterns for these items;

comparing each sensor response pattern through the neural net to determine if any of the sensor response patterns are indistinguishable from one another;

determining which sensors were deflected and the amount of deflection in those sensors for the indistinguishable sensor response patterns;

adjusting the biasing of said sensors to cause said indistinguishable patterns to diverge and be distinguishable by the neural net by changing the biasing members of said sensor to increase the biasing force opposing the weight placed in the vehicle seat; and

repeating the above steps until the senor response patterns are distinguishable from one another.